REMARKS

Claims 1, 2, 5, 6, 7, 8, 11, 12, 13, 14, 15, and 16 were pending in the Application at the time of examination. The Examiner rejected Claims 1, 2, 5, 6, 7, 8, 11, 12, 13, 14, 15, and 16 under 35 U.S.C. 103(a) as obvious over the Teblyashkin reference (EP 1291749) in view of the Cowie et al. reference (GB2378015).

Claims 1, 2, 5, 6, 7, 8, 11, 12, 13, 14, 15, and 16 remain in the Application.

REQUEST FOR EXAMINER INTERVIEW

The present Application was only recently transferred to Applicant's current Attorney. Consequently, Applicant's current Attorney has not been a party to the rather extensive file wrapper in this case. Applicant's current Attorney has reviewed the entire file available to him, however, Applicant's current attorney asks that, as a professional courtesy, should the Examiner be of the opinion that this Amendment does not place the Application in a condition for allowance, the Examiner grant an Examiner Interview prior to the issuance of the next communication from the USPTO. Applicant's Attorney can reached at telephone no. (831) 642-9980

REJECTION OF CLAIMS 1, 2, 5, 6, 7, 8, 11, 12, 13, 14, 15, and 16 UNDER 35 U.S.C. 103(a)

The Examiner rejected Claims 1, 2, 5, 6, 7, 8, 11, 12, 13, 14, 15, and 16 under 35 U.S.C. 103(a) as obvious over the Teblyashkin reference (EP 1291749) in view of the Cowie et al. reference (GB2378015).

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Applicant's independent Claim 1 reads as follows, with emphasis added:

An anti-malware file scanning system for computer files being transferred between computers, the system being implemented on a computer apparatus and comprising:

a) a computer database containing records of known executable programs which are deemed to be not malware and criteria by which a file being processed can be determined to be an instance of one of those programs, the criteria including at least one characteristic signature associated with each said instance;

b) means for processing a file being transferred between computers, the means b) comprising:

a file recogniser operative to determine whether the file being processed is an instance of a known program by checking the contents of the file being processed for the presence of said at least one characteristic signature associated with the said instances; and

a difference checker operative, in the case that the file recogniser determines the file being processed to be an instance of a known program, to check whether the file is an unchanged version of that known program; and

c) **means for signalling the file, depending on the determination made by the processing means, as being:**

likely to be not malware if it is an unchanged version of a known file;

likely to be malware if it is a changed version of a known file; or

of unknown status if it is not determined as being an instance of a known file.

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Applicant's independent Claim 7 reads as follows, with emphasis added:

A method of anti-malware scanning computer files being transferred between computers, the method comprising:

maintaining a computer database containing records of known executable programs which are deemed to be uninfected and criteria by which a file being processed can be determined to be an instance of one of those programs, the criteria including at least one characteristic signature associated with each said instance;

processing a file being transferred between computers by

determining whether the file being processed is an instance of a known program by checking the contents of the file being processed for the presence of said at least one characteristic signature associated with the said instances, and

checking, in the case that the file is determined to be an instance of a known program, whether the file is an unchanged version of that known program;

signalling the file, depending on the determination made by the processing, as being:

likely to be not malware if it is an unchanged version of a known file;

likely to be malware if it is a changed version of a known file; or

of unknown status if it is not determined as being an instance of a known file; and

storing the determination that the file is likely to be not malware, is likely to be malware or is of unknown status.

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Applicant's independent Claim 13 reads as follows, with emphasis added:

An anti-malware file scanning system for computer files being transferred between computers, the system comprising:

a computer database containing records of known executable programs which are deemed to be not malware and criteria by which a file being processed can be determined to be an instance of one of those programs, the criteria including at least one characteristic signature associated with each said instance;

a processor for processing a file being transferred between computers, the processor being operative to determine whether the file being processed is an instance of a known program by checking the contents of the file being processed for the presence of said att least one characteristic signature associated with the said instances and, in the case that the file being processed is determined to be an instance of a known program, to check whether the file is an unchanged version of that known program,

said processor, depending on the determination, identifying the file being processed as (i) likely to be not malware if it is an unchanged version of a known file; (ii) likely to be malware if it is a changed version of a known file; or (iii) of unknown status if it is not determined as being an instance of a known file.

As seen above, each of Applicant's independent Claims 1, 7 and 13 specifically recites signaling (Claims 1 and 7) or identifying (Claim 13) the file, depending on the determination made by processing, as being: likely to be not **malware if it is an unchanged version of a known file**; likely to be malware **if it is a changed version of a known file**; or

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of unknown status if it is not determined as being an instance of a known file, or words to substantially identical effect.

This feature of Applicant's Claims is discussed throughout Applicant's Specification. For instance, see page 2, line 31 to page 3, line 30 of Applicant's Specification, as filed.

In making the rejection of Applicant's independent Claims 1, 7 and 13, the Examiner acknowledges that the Teblyashkin reference fails to disclose, teach, or suggest signaling (Claims 1 and 7) or identifying (Claim 13) the file, depending on the determination made by the processing, as being: likely to be not **malware if it is an unchanged version of a known file**; likely to be malware **if it is a changed version of a known file**; or of unknown status if it is not determined as being an instance of a known file. However, the Examiner then asserts that this recited feature is disclosed in Cowie at page 9, lines 6 to 22. In particular, the Examiner specifically asserts that Cowie teaches that it the file is an unchanged version, it is unlikely malware and is likely to be malware if it is a changed version of a known file at page 9, lines 6 to 22.

Page 8, line 10 to page 10, line 10 of the Cowie reference, including the text cited by the Examiner, reads as follows:

Fingerprint data characteristic of the resource data of FIG. 2 is generated for the purpose of rapid and robust identification of computer programs from their associated resource data. The fingerprint data can include variables such as the number of program resource items specified by the resource data and a time stamp value corresponding to the compilation time of the computer program concerned that is given within the resource specifying data at the start of that data in accordance with the known format. Another

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characteristic of the resource data that tends to be highly individual to a computer program is the co-ordinate position of the resource item having the largest specified size within the hierarchy together with the size value of that resource data.

A characteristic checksum value can also be calculated by parsing through the hierarchy. In particular, the checksum value can add in the number of resource items specified beneath each node within the hierarchy as the hierarchy is progressively traversed by tracking down each path to the lowest point within the hierarchy and then tracing back to the closest un-taken path and then tracking down that path. This parsing path is schematically illustrated by the dotted line in FIG. 2.

As well as adding in the number of items to the checksum as described above, the checksum may also add in the ASC II values of any strings naming particular resource items that are encountered during this parsing. Furthermore, the size values encountered for each resource as specified at the bottom level within the hierarchy may be added into the checksum.

FIG. 3 schematically illustrates the format of the checksum value. The checksum is generated whilst "walking" the resource tree structure, and is composed of the following elements in the resource section header . . .

1) The total number of entries contained in each node of the tree

2) The size of each individual resource item

3) The ASCII string name of any resource item that has a name ID.

These items are combined into the 64 bit checksum accumulator with a 32 bit XOR operation on the lower 32 bits of the checksum accumulator. After every XOR operation the

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checksum accumulator is rotated 1 bit to the left in order to provide an order dependence to the checksum value.

FIGS. 4a, 4b and 4c illustrate three different types of fingerprint values that may be employed. All three types of fingerprint are 16 bytes in length. The first byte is a control byte that indicates which type of elimination data is specified within that fingerprint. The next six bytes specify the elimination data. The following one byte specifies the number of entries processed in calculating the checksum. The final eight bytes specify the checksum itself.

FIG. 4a illustrates the fingerprint format.

FIG. 4b illustrates the control byte. Bits 4, 5 and 6 comprise a 3-bit field specifying the elimination data type as being one of co-ordinate/size data, timestamp data or file length data. Bits 0, 1, 2, 3, and 7 are reserved.

FIG. 4c illustrates the different elimination data formats for the three different types of fingerprint. Type 1 is the primary type of fingerprint employed. Type 1 fingerprints specify the number of entries within the hierarchical resource data, the co-ordinates of the largest resource, the size of the largest resource and the checksum value. The first three items in this fingerprint are indicative of the computer file concerned, but are not generally as highly specific as the checksum value. The main reason for the inclusion of the first three items within the fingerprint is to provide a mechanism for rapid elimination of fingerprints as non-matching when conducting a search through a large number of potential fingerprints. These three items of data may be used to hash into a large table of fingerprints to reduce the number of candidate fingerprints that need to be searched and thereby increase the processing speed. The checksum value tends to be highly specific to a particular collection of resource data and may be a 64-bit checksum number as discussed above or a 32-bit checksum number in less sophisticated systems.

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Applicant respectfully submits that nothing in the text above, including the text cited by the Examiner, supports the Examiner's assertion that signaling (Claims 1 and 7) or identifying (Claim 13) the file, depending on the determination made by the processing, as being: likely to be not **malware if it is an unchanged version of a known file**; likely to be malware **if it is a changed version of a known file**; or of unknown status if it is not determined as being an instance of a known file is disclosed, taught, or suggested at Cowie at page 9, lines 6 to 22. Applicant respectfully submits that the text above does appear to describe a version of a checksum process, however, the checksum process is not disclosed as being performed for the purpose of signaling (Claims 1 and 7) or identifying (Claim 13) the file, depending on the determination made by the processing, as being: likely to be not **malware if it is an unchanged version of a known file**; likely to be malware **if it is a changed version of a known file**; or of unknown status if it is not determined as being an instance of a known file. Indeed there is no mention of any processing for the purpose of identifying a changed version indicative of the presence of malware in the text above.

In light of the discussion above, Applicant respectfully submits that the Examiner's assertion that signaling (Claims 1 and 7) or identifying (Claim 13) the file, depending on the determination made by the processing, as being: likely to be not **malware if it is an unchanged version of a known file**; likely to be malware **if it is a changed version of a known file**; or of unknown status if it is not determined as being an instance of a known file is disclosed, taught, or suggested at Cowie at page 9, lines 6 to 22 is not supported by the art of record. Consequently, Applicant respectfully requests the Examiner withdraw the rejection of Applicant's independent Claims 1, 7, and 13 and allow Claims 1, 7, and 13 to issue.

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In addition: Claims 2, 5 and 6 depend on Claim 1 and therefore include all of the features and limitations of Claim 1; Claims 8, 11 and 12 depend on Claim 7 and therefore include all of the features and limitations of Claim 7; and Claims 14, 15, and 16 depend, directly or indirectly on Claim 13 and therefore include all of the features and limitations of Claim 13. Consequently, Applicant respectfully requests the Examiner withdraw the rejection of Applicant's Claims 2, 5, 6, 8, 11, 12, 14, 15, and 16 and allow Claims 2, 5, 6, 8, 11, 12, 14, 15, and 16 to issue for at least the reasons set forth above.

CONCLUSION

For the foregoing reasons, Applicant respectfully requests allowance of all pending claims. If the Examiner has any questions relating to the above, the Examiner is respectfully requested to telephone the undersigned Attorney for Applicant.

CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence is being transmitted to the United States Patent and Trademark Office via the Office's EFS-Web system on the date shown below.

Mona Marshall — September 4, 2009

Mona Marshall — Date of Signature

Respectfully submitted,

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